

**IN THE CLAIMS**

Please cancel claim 1, amend claim 2, and add new claim 18 as shown in the following listing of claims.

Claim 1 (Canceled).

Claim 2 (Currently Amended): A semiconductor device manufacturing method according to claim [[1]] 3, wherein the insulation insulating film is an interlayer insulation film.

Claim 3 (Previously Presented): A manufacturing method of a semiconductor device comprising the steps of:

generating a plasma of a source gas consisting of a chemical compound of carbon and fluorine and including hydrogen atoms of  $1 \times 10^{-3}$  atomic % or less, and

forming an insulating film consisting of a fluoridation carbon film that includes hydrogen atoms of not more than 3 atomic % and more than 0 atomic%, on a substrate, by using the plasma of the source gas, the hydrogen atoms resulting from a chemical compound including hydrogen atoms as impurities.

Claim 4 (Original): A manufacturing method of a semiconductor device according to claim 3, further comprising: heating the substrate at a temperature of 420°C or lower, after the step of forming the insulating film.

Claim 5 (Original): A manufacturing method of a semiconductor device according to claim 3 or 4, wherein the chemical compound of carbon and fluorine is  $C_5F_8$ .

Claims 6-17 (Canceled).

Claim 18 (New) A manufacturing method according to claim 3, wherein the ratio of fluorine against carbon in the fluoridation carbon film is 0.1 to 1.5.